Workshops, genomics and micro*scope: education and public outreach at the Marine Biological Laboratory

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The primary activity of the MBL team is course development that will advance science education and enhance training of a new generation of astrobiologists. To that end, we conduct teacher professional development courses that emphasize the importance of microbes and astrobiology, and offer advanced courses of interest to astrobiology researchers. Additionally, the development of micro*scope provides an internet resource for images and descriptions of microorganisms appropriate for all levels of inquiry.

Teacher enhancement workshops give middle, high school and community college teachers first hand exposure to current astrobiology topics presented by active research scientists. Teachers spend significant time in the laboratory and gain experience with essential lab and teaching techniques, classroom activities and materials. We offer Living in the Microbial World, a one-week intensive course in the summer, and shorter workshops in the spring that focus on a single topic. The 2005 workshop "Discover the Microbial World Within" examined microbes, symbiosis and evolution.

Increasingly, comparative molecular and genomic approaches are being used to address questions of phylogeny, ecology and early evolution related to Astrobiology research goals. Two intensive training courses combine presentations from expert faculty on current research topics in molecular phylogenetic analysis and genomics with hands-on instruction using the newest equipment, software, algorithms, software and techniques.

Micro*scope is an image-rich web database for microbial diversity (http://microscope.mbl.edu). Micro*scope uses taxonomy to organize, index and manage local information. It provides matrix identification guides, taxon-specific links to other websites, and star* software available for free download. A demonstration will be provided.